Before the
Department of Commerce
National Telecommunications and Information Administration

In the Matter of	)	
	)	
Development of the Nationwide	)	Docket No. 120928505-2505-01
Interoperable Public Safety Broadband	)	
Network	)	

COMMENTS OF THE PUBLIC SAFETY INTEROPERABLE COMMUNICATIONS OFFICE, STATE OF ARIZONA

I. Introduction

Arizona has been proactive in establishing a single point of contact for FirstNet. Arizona's single point of contact as determined by its Governor's Office is the Public Safety Interoperable Communications) Office (the "PSIC Office") of the Arizona Department of Administration. The PSIC Office, which is advised by and supports Arizona's Statewide Interoperability Governing Body, the Public Safety Communications Advisory Commission (PSCC), has established the AZPSBN working group and has been providing regular status reports to the PSCC, the Statewide Interoperability Executive Committee (SIEC), the Governor's Office and its stakeholders since March 2012 (Arizona Governance Structure for Public Safety Interoperable Communications).

Arizona's PSIC Office has been actively involved with our State, Local and Tribal jurisdictions and public safety and service stakeholders, including utilities, in addition to working with the National Public Safety Telecommunications Council and the Public Safety Spectrum Trust Operator Advisory Committee (now the Early Builder Advisory Council) over the last two years at the State, Regional and National levels. The following comments represent the collective input of the PSIC Office, the AZPSBN working group and our public safety and service stakeholders.

II. Conceptual Architectural Approach

We agree that a pre-established business agreement for a multi-Mobile Network Operators (MNO) plus satellite would optimize the access and reliability for Public Safety, especially during the FirstNet build out and when roaming to non-FirstNet coverage areas (until coverage for remote rural areas can be provided).

We do, however, see difficulties in realizing the benefits in rural areas where there may be only one or possibly no MNO representation, leaving only satellite.

Further, the sheer number of bands required to support the multiple MNOs for the User Equipment (UE) may make them more costly and relatively inefficient. They would, however, be uniform perhaps

creating economies of scale for purchasing. They would also be useable nationwide and would allow for a centralized repair/replacement method (used by most high volume consumer electronics manufacturers and bulk resellers today).

We applaud FirstNet's recognition of the need for a Distributed Core Network introduced in slide 13 of the FirstNet Nationwide Network (FNN) Proposal. This portion of the proposal establishes the need for a geographically distributed, mirrored and hardened backbone, reliable enough to provide each state with redundant and near infallible access to the Evolved Packet Core to deliver functionality during the most extreme emergencies.

One of the main things that render regular networks unreliable for Public Safety is the lack of priority mechanisms, which can result in the very real problem of overload and shutdown. Further, in an overload situation networks tend to go down together. To be considered truly part of the NPSBN a network should require Priority and Preemption, along with Security and Reliability. The portion of the multiple network model built from regular networks is not really "FirstNet".

Further, any sharing of the D-block spectrum should require that it be used under the FirstNet operating model with full Priority, Preemption, Security and Reliability. In other words, non-Public Safety users must face the very real fact that they may get delayed or bumped and Public Safety users must always be allowed to access the system and proceed with appropriate priority.

Although we have articulated a number of caveats, we still feel the proposed model is valuable. As it is likely to take some time to build out the NPSBN to Public Safety specifications, having a uniform fail-over/roaming, national system is highly desirable.

This model may best be considered as a cellular/air-card replacement rather than a first phase of FirstNet. Benefits of this model include:

- Establishing a nationwide pricing structure that local jurisdictions can take advantage of strictly as an cellular/air-card contract replacement
- Establishing FirstNet as a positive partner with the best interests of public safety in mind
- Providing an opportunity for FirstNet to work on a national level with MNOs
- Providing an opportunity for MNOs to partner to help get the NPSBN built

III. Special considerations for rural portions of the nation

For states like Arizona with a largely rural geography, a critical piece of the architectural puzzle is the lack of adequate backhaul infrastructure.

Arizona plans to leverage the efforts of our Digital Arizona Program (a State Broadband Initiative under NTIA), whereby the project group coordinated with the State legislature to pass Senate Bill 1402, the "Digital Arizona Highways Act of 2012". This legislation expands existing rules governing Arizona Department of Transportation (ADOT) management of state right-of-way (ROW) to include

transportation of information as well as vehicles, and to make available conduits in the ROW to private providers on a cost-recovery basis.

Once implemented, this model will provide streamlined access to the ROW for constructing broadband conduits, thereby improving availability of broadband services to poorly served areas of the State. Arizona does not plan to pull fiber through the conduit, but rather lease the conduit, at cost, to private providers who will benefit from reduced overhead associated with permitting, environmental and rights-of-way issues as a result of this legislation.

IV. Conceptual Applications Development Approach

We agree with FirstNet's goal of encouraging unique approaches and facilitating innovation, however, we believe all applications should be validated and certified prior to being made available.

We would suggest that it may be more efficient and less intrusive to pre-define the Home Subscriber Server (HSS) Identity Management Information. Both the data elements and query/update interfaces would need to be defined; that way the application developers would know what information is available and how to access/update it.

It may be appropriate to divide applications into two broad categories - stand-alone and integrated - where stand-alone apps do not require information from the NPSBN data stores but integrated apps do. For the integrated apps that do require access to NPSBN data stores, the authorization to share certifications should be regulated by appropriate written policies and procedures. Local jurisdictions could then gain access where appropriate but public safety sensitive information would not be made generally available.

We highly recommend that an advisory committee be formed to start developing the policies and procedures needed by local jurisdictions. These policies and procedures should meet the local jurisdictions' legislative and procedural needs for having their information on the NPSBN.

We also recommend leveraging the work of organizations such as the Organization for the Advancement of Structured Information Standards (OASIS), the Unified Incident Command and Decision Support (UICDS), and the Integrated Public Alert and Warning System (IPAWS), etc., to assure application developers benefit from libraries of standardized interfaces and methodologies already in place.

V. Business Models, Public/Private Partnerships and FirstNet Partnering

We have worked with several other States on their recent NGA responses and with the PSST-OAC (now the EBAC) on their NTIA NOI response and everyone we have spoken to has expressed a desire for more clarity about how the NPSBN business relationships will work. Namely, how the sharing of infrastructure, sub-letting of spectrum and public/private partnerships will work. In addition, stakeholders are interested in how the mutually beneficial cooperative process will work in regard to the State level RFP.

We encourage the FirstNet Board to move rapidly toward clarifying the business model and partnering approaches. The overarching policies should provide transparency and national visibility with all options shared equitably.

At the State level we are faced with managing the education and outreach process and accumulating the NPSBN requirements from our stakeholders, however our local public safety entities:

- Struggle to afford the land mobile radio equipment they have now.
- Can't commit resources to the NPSBN effort unless they can foresee real value which they will be able to afford or barter for.
- In many cases, have never worked under a fee-based model
- Have not been told what real world functionality will be available.

Preliminary questions, observations, and thoughts from various stakeholders are noted below:

- Criteria: The driving criteria for a possible "opt-out" recommendation may be the economics and governance provisions put forth by FirstNet, more than the proposed technology. The State, with input from local cities and municipalities, needs to have maximum flexibility in determining the criteria to review and modify the FirstNet RFP before making a recommendation to the Governor on his/her decision on whether or not to opt-out (consistent with Public Law 112-96, the Middle Class Tax Relief and Job Creation Act of 2012). It is critical that the public safety community within each state have a voice in the process. The end result will likely be the establishment of different criteria (or different weights to criteria) for the evaluation of the FirstNet RFP in each state. We would not support efforts to create "allowable" criteria to drive the opt-out recommendation and ultimately, the decision.

- At this time, there are many unknown factors that will influence the decision making process. We believe it is important for States to conduct an iterative and interactive consultative process prior to establishing the specific criteria to be used to evaluate the FirstNet RFP. Broad categories to consider in the decision making process include:

    - Coverage
    - Capacity
    - Initial funding of both short-term and long-term costs
    - Reliability
    - Participant Pool
    - Applications
    - Critical Infrastructure
    - Local Needs/Special Circumstances
    - Governance
    - Etc.

- Partners: What partnering arrangements are included in FirstNet's RFP (i.e., utilities or commercial service providers) and what are the cost/benefits of these partnering agreements? Are Public-Private partnerships being considered?

- Existing Infrastructure: Is the use of existing public safety and other state/local infrastructure (tower sites, fiber & microwave) being considered and will there be benefits (such as discounted user fees or monthly charges) to establishing these arrangements? Will the owners of the locally owned infrastructure be allowed to charge FirstNet for the use of its towers, radio equipment rooms, fiber backhaul, etc.? Are we required or expected to allow FirstNet to use existing assets without any form of compensation?

    - We are in discussions with several utilities about sharing options for both infrastructure and spectrum. Once we come to what we believe is a workable solution, does that mean Arizona brings that to the bargaining table with FirstNet to help defray our RAN costs and thereby obtain a reduced rate?

- Customization: Will the NPSBN network simply meet the Public Safety minimum requirements or will the network be tailored to the needs of each user agency?

- Structure: How many simultaneous users will be able to access the network from one node on the network?

- Maintenance: How will technology refresh be handled?

- Management: How will the rules of engagement [management and control of the network] be established and at what level?

- Timeline: What is the anticipated project timeframe for the build-out of the network? Will it be built simultaneously in several states or will there be a phased in approach? Will a pilot test bed in a certain part of the country be allowed and built out first to test and ensure its capabilities? If so, how will these sites be chosen?

- Costs: Will there be a limit on charges per user? Will each state's charges vary or will all users on the nationwide network be charged the same rate? Who will collect the user fees; will that be at the state or federal level? Will there be a chargeback model? How much per handheld device? What about ongoing maintenance?

If some state comes up with a feasible partnering solution, then can all states benefit even if the RFP process has taken place?

- We believe that if all States are aware of the deals being worked by other States, then there will be a reduced likelihood or benefit in "playing hardball".

- It may be beneficial to consider an early adopter discount, where those who Opt-In (at a State level) and adopt (at a jurisdictional level) get reduced rates for X years. This may assure the maximum density of users and a compressed onboarding timeline.

VI. Cooperative consultation process

We plan to utilize the following steps in our RFP consultation process:

- Outreach and education of our statewide stakeholders, including detailed monthly updates to our Statewide Interoperability Governance body and our Statewide Interoperability Executive Committee
- Continue monthly briefings with our Governor's Office throughout the process
- Establish our requirements – coverage, capacity, reliability, applications, etc.
- Determine possible business models, public/private partnerships, legislative requirements and statewide permit/right-of-way template and process improvement options.
- Work with the State Historic Preservation Office (SHPO) and Tribal Historic Preservation Offices to define the review and approval process.
- Meet with FirstNet to:
    - Discuss our early requirements gathering and discuss options.
    - Review and agree on data collection elements, formats and costs.
- Work with stakeholders statewide to document infrastructure assets, rights-of-way, etc.
- Continue the education/outreach process to set expectations based on a clearer picture of FirstNet's planned approach.
- Revisit the requirements and participant pool based on adjusted expectations.
- Firm up possible public/private partnership models.
- Meet with FirstNet again to:
    - Discuss our final requirements based on firmer data and options.
    - Validate and confirm the proposed public/private partnerships.
    - Validate and confirm the business model and billing process.
    - Review and agree on RFP requirements/elements prior to release to the bidding parties.
- Serve on the FirstNet RFP review team for Arizona's RAN bid.
- Perform a critical evaluation comparing the FirstNet RFP versus the needs of the state and review it with our Statewide Interoperability Governing Body and key stakeholders.
- Once a consensus is established and recommendations are formulated, conduct a review and recommendation session with the Governor's Office (leading to a decision of whether or not to opt-out).

General

We further believe that FirstNet should provide some additional clarity around the State and Local Implementation Grant Program (SLIGP) process in order to help move things forward nationally and to allow for focused efforts at the State, local and Tribal levels.

Thank you for your consideration.